



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,001	03/01/2004	Jeffrey S. Lille	HSJ9-2003-0114US1	1299
32112	7590	09/12/2006	EXAMINER	
INTELLECTUAL PROPERTY LAW OFFICES 1901 S. BASCOM AVENUE, SUITE 660 CAMPBELL, CA 95008			WATKO, JULIE ANNE	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/791,001	Applicant(s) LILLE, JEFFREY S.	
	Examiner Julie Anne Watko	Art Unit 2627	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
 b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☒ Newly proposed or amended claim(s) 7-10 and 24-27 would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: 7-10 and 24-27.
 Claim(s) objected to: _____.
 Claim(s) rejected: 1-6, 11, 12 and 21-23.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
 12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
 13. ☒ Other: See Continuation Sheet.

09/08/2006



Julie Anne Watko, J.D.
 Primary Examiner
 Art Unit: 2627

Continuation of 11. does NOT place the application in condition for allowance because: Applicant asserts on page 7, 3rd paragraph, that "heat sink structure includes a seed layer 233 having heat sink material 232 formed thereon", such that the limitation "heat sink is disposed at least in part directly upon said second magnetic pole" of claim 3 is met by the Fig. 8 embodiment. The Examiner has considered this argument thoroughly and asserts that this interpretation of the limitation "heat sink" is inconsistent with the specification.

On page 8, 1st full paragraph, the specification recites "heat sink structure 120" and "heat sink 120". Applicant's use of the term "heat sink" refers to a single layer (e.g., 120 in the embodiment described on page 8). Furthermore, Applicant's use of the term "heat sink structure" refers to a single layer (e.g., 120 in the embodiment described on page 8). Moreover, Applicant's use of the terms "heat sink structure" and "heat sink" are interchangeable in the specification insofar as both terms refer to the exact same layer (120). Neither term refers to the seed layer.

Additionally, on page 10, last paragraph, Applicant states that "seed layer 148 typically comprised of copper, is deposited, followed by the fabrication of a photoresist layer (not shown) having a heat sink trench formed therein, followed by the electroplating of the lower heat sink structure 144 ... upon the seed layer 148". In other words, deposition of the seed layer is fully complete before electroplating of the "heat sink structure" begins. It is clear from this disclosure that what Applicant refers to as a "heat sink structure" is formed "upon the seed layer", and does not include the seed layer. Thus, the "heat sink" of claim 3 does not include the seed layer. The seed layer appears between the second magnetic pole and the "heat sink". The "heat sink" of claim 3 is therefore not "disposed at least in part directly upon said second magnetic pole".

Claim 3 is neither described nor enabled, and the rejections under 35 U.S.C. §112 are maintained.

On page 12, 3rd paragraph, Applicant argues that "the embodiments depicted in Fig. 8 and described in the Specification is a device wherein the heat sink structure 220 is fabricated upon the second magnetic pole 186, and wherein the heat sinks structure 220 is fabricated within the same magnetic head layers and thus coplanar with the electrical lead 228." The Examiner has considered this argument thoroughly and agrees that the embodiments depicted in Fig. 8 and described in the Specification is a device wherein the heat sink structure is fabricated upon the second magnetic pole, and wherein the heat sinks structure is fabricated within the same magnetic head layers and thus coplanar with the electrical lead; however, claim 3 requires that the "heat sink is disposed at least in part directly upon said second magnetic pole" (emphasis added). Applicant's disclosed embodiments do not show this. For example, in Fig. 8, a seed layer appears between the heat sink and the second magnetic pole. In order to alter the Fig. 8 embodiment to conform to the limitations of claim 3, the seed layer would need to be removed between the second magnetic pole and the heat sink. In order to maintain coplanarity between the heat sink and the electrical lead as required by claim 1, the heat sink would need to become thicker, which would violate the equal thickness limitation of claim 1; however, if the equal thickness were maintained, then the coplanarity would be destroyed when the seed layer were removed between the second magnetic pole and the heat sink. Applicant does not enable a person of ordinary skill in the art how to remove a seed layer from Fig. 8 without bringing the device out of the metes and bounds of claim 3.

Claim 3 is neither described nor enabled, and the rejections under 35 U.S.C. §112 are maintained.

In response to applicant's argument that there is no suggestion to combine the change in location with the change in dimension, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the prior art of record explicitly teaches the very advantage that Applicant asserts. On page 14, Applicant has characterized the invention as "a reduction in fabrication steps, wherein the heat sink is fabricated in the same fabrication steps for the creation of the electrical leads of the induction coil." An identical advantage, reduction in fabrication steps, is taught by Yamada et al. See col. 5, lines 14-25, "In the case of forming the heat radiating layer 30 and the coil 22 in the same layer, the heat radiating layer 30 can be formed in the same step, so no extra step is required. Unlike the case of forming the heat radiating layer 30 and the coil 22 in separate steps, mutual shift of positions of the heat radiating layer 30 can be narrower. By the narrow space, the heat can be efficiently conducted from the coil 22 to the heat radiating layer 30, so that the heat radiativity can be improved." Although coil layers and lead layers are different layers, both are copper layers, and both are known heat sources when operating current passes through them. Thus, although Yamada et al does not anticipate a heat sink formed in a step with a lead layer, Yamada's teaching of forming a copper heat sink in a same fabrication step as another current-bearing copper layer renders obvious a heat sink formed in a step with a current-bearing copper lead layer. Furthermore, a person of ordinary skill in the art would have recognized that the manufacturing efficiency of the simultaneous formation taught by Yamada et al is greatest when the two layers simultaneously formed from the same material are deposited to the same thickness.

The rejections of the independent claims are maintained.

Other rejected claims have been argued based upon their dependency from the independent claims. Because the Examiner maintains the rejection of the independent claims, these arguments are non-persuasive..

Continuation of 13. Other:

The amendments to the specification and the drawings are disapproved, insofar as they are inconsistent with each other. For example, Applicant's proposed amendment to the specification recites "contact pads 233", which is inconsistent with the appearance of contact pad 230 in Applicant's proposed Fig. 6.